Cerro Gordo

CA-010-055

CERRO GORDO WILDERNESS STUDY AREA (WSA)

(CA-010-055)

THE STUDY AREA ----

14,079 acres

The Cerro Gordo WSA is located in western Inyo County, three miles northwest of Keeler, California. The WSA includes 14,079 acres of Bureau of Land Management (BIM) land. There is no State or private land in the WSA (see Map 1 and Table 1).

The northern boundary of the WSA follows a ridgeline road southeast and arcs around a mining area just prior to joining the Cerro Gordo County road. The boundary follows the Cerro Gordo County road southwest and turns northwest at a primitive vehicle route. The boundary proceeds northwest along the primitive vehicle route, then continues cross-country averting areas of past mining activity. At Swansea Road, the boundary heads north until it reaches the ridgeline road.

The Cerro Gordo WSA occupies the southwestern terminus of the Inyo Mountain range. The Inyo Mountains are a linear and narrow high desert range that lie at the western edge of the Basin and Range geomorphic province. The Sierra Nevada geomorphic province is a few miles west of the unit. Confined to the range's west slope, the unit's physical relief is the primary feature of the area. The area is characterized by eroded sedimentary peaks, precipitous ridges, and steep canyons with numerous ephemeral drainages. Elevation ranges from 4,200 feet to 9,200 feet. Vegetation is sparse in the lower elevations and at the southern end of the unit. At these locations, creosote and other low desert shrubs predominate. The unit is also a transition zone between two biotic plant communities, which adds local vegetational diversity. The high elevations and northern slopes support pinyon-juniper stands.

Additionally, the area contains significant historical values as well as outstanding views of the Sierra Nevada to the west and the Panamint Mountain range to the east. A variety of wildlife, including sensitive species candidates, inhabit the unit.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Various suitability recommendations were analyzed in the Draft and Final Environmental Impact Statements (EIS) for the Benton-Owens Valley/Bodie-Coleville Wilderness Study Areas. A summary of the area's wilderness values was included in the Final EIS. Three different suitability recommendations were analyzed in the EIS: all wilderness, partial wilderness recommending approximately 87% of the area suitable, and no wilderness.

2. RECOMMENDATION AND RATIONALE ---

0 acres recommended for wilderness 14,079 BLM acres recommended for nonwilderness

No wilderness is the recommendation for this WSA. The entire acreage in this WSA is released for uses other than wilderness. The all-wilderness alternative is considered to be the environmentally preferred alternative as it would result in the least change from the natural environment over the long term. The no-wilderness alternative will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The WSA is recommended nonsuitable due to public input received by the Bureau during the Draft Environmental Impact Statement (DEIS) public review period. In addition, the area's potential for mineral occurrence was a secondary factor in the non-suitable recommendation.

At the time the DEIS was published in the fall of 1983, the Bureau had recommended the partial-wilderness alternative as its recommendation for the Cerro Gordo WSA. Substantial local comments received during the subsequent public review period ultimately affected the recommendation for this WSA. The DEIS suitable recommendation for this WSA was a primary focus of the public hearing that was held in Bishop, California. Among the various public comments submitted, regarding the DEIS for this unit, Inyo County provided input opposing the suitable recommendation on several occasions. In addition, the Bakersfield District Advisory Council resolved to recommend a change in the DEIS recommendation to non-suitable for wilderness designation.

Secondarily, resource conflicts in the WSA include small portions of the WSA which contain moderate to high metallic mineral potential, a major portion of the WSA with moderate potential for normetallic minerals, and a moderate potential for uranium for the entire WSA.

Additionally, the southwest corner of the unit has a potential for geothermal resources.

There are approximately ten miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use in the WSA.

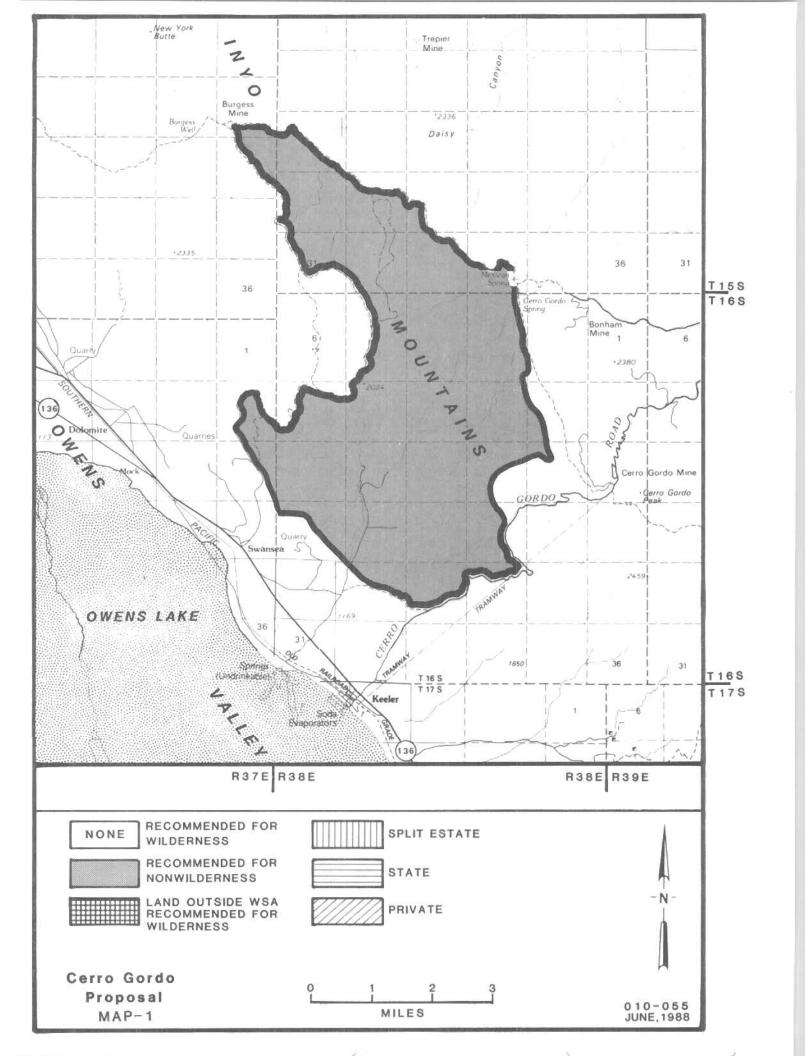


TABLE 1 - Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area BIM (surface and subsurface) Split Estate (BIM surface only)	Acres 14,079 0
Inholdings State Private	0
Total	14,079
Within the Recommended Wilderness Study Boundary BIM (within WSA) BIM (outside WSA) Split Estate (within WSA) Split Estate (outside WSA) Total BIM Land Recommended for Wilderness	Acres 0 0 0 0 0 0
Inholdings State Private	0
Within the Area Not Recommended for Wilderness BIM (surface and subsurface) Split Estate (BIM surface only)	<u>Acres</u> 14,079 0
Total BLM Land Not Recommended for Wilderness	14,079

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The Cerro Gordo WSA generally appears to have been affected primarily by the forces of nature, with human influences unnoticeable for a major part of the WSA. The WSA is a rugged environment consisting of eroded mountains, ephemeral drainages, rocky buttes, and narrow ridges. The unit's numerous interior canyon drainages and pristine mountainscapes provide illustrative examples of a land that has retained its natural character. Mixed desert shrubs occupy the lower- and mid-level slopes. The area is a vegetative ecotone containing Mojave Desert flora and Great Basin flora.

Seventy-five percent of the WSA is Mojave Desert scrub species and the remainder pinyon-juniper woodlands. Plant density is low. Creosote bush with some Joshua trees occupy the lower alluvial fans, the mid-elevational mountainous slopes are dominated by shadscale, budsage, and desert needlegrass. The higher elevations support pinyon-juniper trees with a sagebrush understory.

Most of the existing imprints in the Cerro Gordo WSA consist of approximately ten miles of rugged and primitive jeep routes located in the southwest and northwest sections of the WSA. In addition, the Saline Valley Salt Tram (a historical value), and some inactive mining areas are located in the WSA. These features are substantially unnoticeable and minor in the WSA as a whole due to the unit's highly variable topography and size.

 Solitude: Outstanding opportunities for solitude are available throughout the WSA primarily because of topographic variations. Pinyon-juniper stands also provide vegetative screening at the higher elevations. In addition, the WSA's rugged and desolate nature enhances opportunities for solitude.

This WSA is overflown by military aircraft as part of the national defense mission during approved military operations. The visual intrusions and associated noise create temporary effects on solitude which are deemed acceptable and necessary as a part of the defense preparedness of the nation.

- 3. Primitive and unconfined recreation: The area provides extensive opportunities to participate in primitive and unconfined recreational activities such as hiking, backpacking, hunting, horseback riding, and nature appreciation. The unit's size, diverse terrain, rugged nature, and sparse vegetation contribute to these recreation opportunities. The area is popular with backpackers who travel from the San Francisco and Los Angeles areas to recreate in this area.
- 4. <u>Special features:</u> The WSA contains the Saline Valley Salt Tram which is on the National Register of Historic Places.

 Approximately three miles of the Salt Tram is in the WSA.

 Construction of the Salt Tram began in 1911.

It was built to carry salt (99% pure) from Saline Valley over the Inyo Mountains into Owens Valley. It is the steepest tramway in the United States. Remnants of past Cerro Gordo mining activity are located outside the WSA near the south edge of the unit. Cerro Gordo, a silver boom town of the 1860s and 1870s, is known for hitting one of the biggest silver strikes in California.

The WSA contains two unnamed spring areas which provide habitat for the Inyo Mountain salamander. The salamander is an endemic species unique to the Inyo Mountains only. It is currently a candidate for the U.S. Fish and Wildlife Service's "threatened or endangered" species list.

Additionally, two candidate species of sensitive plants <u>Friogonum eremicola</u> and <u>Perityle inyoensis</u> occur within the WSA near the crest of the Inyo Mountains.

The scenic quality of the WSA is outstanding. The WSA's physical relief consists of numerous mountains, steep canyons, and eroded buttes. Of particular interest are the sweeping views of the Sierra Nevada and the Panamint Range that are available outside the WSA. The transition zone of Mojave Desert flora and Great Basin flora enhances the WSA's scientific and educational study opportunities.

B. <u>Diversity in the National Wilderness Preservation System (NWPS)</u>

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 14,079 acres of the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem. The Cerro Gordo WSA would not increase the diversity of the types of ecosystems represented in the NWPS.

Table 2 - Ecosystem Representation

Bailey-Kuchler Classification	NWPS Areas		Other BIM Studies	
Domain/Province/PNV	areas	acres	areas	acres
	NATIONWIDE			
Intermountain Sagebrush/ Juniper-Pinyon Woodland	4	81,301	75	2,156,824
	CALIFORNIA			
Intermountain Sagebrush/ Juniper-Pinyon Woodland	3	61,701	18	351,754

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of seven major population centers. Table 3 summarizes the number and acreage of designated areas and other BIM study areas within a five-hour drive of the population centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

Population	NWPS Areas		Other BLM Studies	
Centers	areas	acres	areas	acres
California				
Anaheim-Santa Ana	25	2,823,534	153	5,703,515
Bakersfield	32	4,071,358	128	3,998,548
Los Angeles-Long Beach	27	2,876,234	135	4,958,751
Oxnard-Ventura	23	2,195,198	85	2,703,260
Riverside-San Bernardino	22	2,031,054	205	7,658,649
Santa Barbara-Santa Maria-		1150 T. J.		20. March 10.004
Lompoc	20	1,166,142	35	528,590
Nevada				
Las Vegas	46	3,507,293	311	11,186,463

3. Balancing the geographic distribution of wilderness areas: The WSA is within 50 air miles of nine BIM WSAs recommended for wilderness designation. The John Muir Wilderness and the Golden Trout Wilderness, 18 and 23 miles to the west, respectively, are the nearest designated wilderness areas. These wilderness areas are administered by the Inyo National Forest. Sequoia-Kings Canyon National Park, managed by the National Park Service, is located 23 miles to the west. Other nearby designated wilderness areas include the South Sierra Wilderness and the Domeland Wilderness which are managed by the Sequoia National Forest.

C. Manageability

The Cerro Gordo WSA is generally manageable as wilderness. The steep, rugged natural features inhibit indiscriminate off-highway vehicle use except along portions of the more physically gentle southwest and east boundaries. Some signing, fencing portions of these areas, providing detailed maps, and regular patrolling would be required to insure the integrity of the unit. Indiscriminate off-highway vehicle use is considered to be low.

Under certain circumstances, a portion of the Cerro Gordo WSA would be unmanageable as wilderness. Although the probability is low to moderate, a determination of valid existing mineral rights in the west portion of the WSA could conflict with wilderness management. Development of mining claims which are found to have valid existing rights could impair the area's wilderness values with or without wilderness designation. Wilderness values of naturalness, solitude, and opportunities for primitive recreation experiences would be permanently impaired in this area.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of information known at the time of the preliminary suitability recommendation: The Cerro Gordo WSA is within the BIM New York Butte Geology-Energy-Minerals (G-E-M) Resource Area (GRA). The G-E-M data in the Benton-Owens Valley/Bodie-Coleville EIS in 1987 indicates that the WSA has a potential for occurrence of gold, silver, lead, uranium, limestone, dolomite and geothermal resources.

The G-E-M data indicate that the WSA has two areas of high potential for metallic minerals. One in the extreme northern and one in the extreme western portion of the WSA. The remainder of the WSA is shown as having a low potential for metallics. All metalliferous ore deposits in the GRA are genetically and spatially related to Cretaceous intrusions of quartz monzonite. These intrusives invaded a thick sequence of Paleozoic clastic and carbonate sediments.

The WSA lies immediately northwest of the Cerro Gordo Mining District. The gold, silver, lead and zinc deposits of this district formed as replacement zones within the carbonate rocks as a result of granitic intrusion. Operating in the late 1800s and early in 1900, this district produced approximately \$17 million in precious metals. The area around this district within the WSA is rated in the G-E-M report as having low potential for metallics.

The northern area of high metallic potential is within the Beveridge Mining District near the Burgess Mine. This is a small district of unknown production. The Burgess Mine production is from a gold-bearing quartz-sulphide vein at the contact between Triassic limestones and a diorite porphyry dike. Samples taken from the ore zone ran \$20 to \$40 per ton of gold at 1912 prices. Replacement zones similar to the Cerro Gordo District mineralization are also present in this area. However, the grade and extent of the zones are unknown.

The western area of high metallic potential contains the Flagstaff Mine, the Lost Frenchman Mine, the Pennsylvania Mine and numerous prospects. This area is characterized by silver-lead bearing quartz veins associated with granitic intrusions. No production records were available. The entire WSA was classified as having a moderate potential for the occurrence of uranium. No uranium production has occurred. The Big Horn uranium prospect, however, is located four miles west of the WSA. The moderate potential classification was based on the presence of a favorable environment for emplacement of uranium. The granitic rocks and rhyolitic volcanics are possible uranium sources. Uranium could be

concentrated in any of the formations within the WSA as vein or fracture filling deposits.

The eastern quarter of the WSA is classified as having a moderate potential for the nonmetallic minerals limestone and dolomite. Limestone and dolomite are known to exist in this area. They were classified as having moderate potential due to uncertainties in quality and marketability.

The southwestern edge of the WSA is classified as having a high potential for geothermal resources. This classification is based on the existence of warm springs near the western edge of the WSA and the fact that geothermal exploration holes were drilled in this area which were reported to intersect thermal waters at shallow depths. The G-E-M report erroneously indicates that there were Federally administered geothermal leases in this area. Six noncompetitive leases covering approximately 13,500 acres were applied for in 1982. However, these applications were dropped in 1983 and were never actually leased. As of Spring 1986, 47 unpatented mining claims were located within the WSA.

 Summary of significant new mineral data collected since the suitability recommendations which should be considered in the final recommendation: No U.S. Geologic Survey (USGS) or U.S. Bureau of Mines (BOM) mineral surveys were conducted in this WSA.

New data were received from Asamera Minerals Inc. (Asamera) in April of 1988 which changes the metallic potential from low/no potential to moderate potential along the eastern margin of the WSA. These data were the result of Asamera's 1986/1987 precious metals exploration activities in the Cerro Gordo Mine area immediately to the southeast of the Cerro Gordo WSA. A total of 94 exploration holes were drilled to an undisclosed depth. Results of 12 of these holes were submitted to BIM. They indicate the interception of mineralization in zones as thin as one and one-half feet and as thick as 110 feet. The grades of mineralization ran from a low of 0.032 ounces gold/ton and 0.18 ounces silver/ton to a high of 2.616 ounces gold/ton and 65.55 ounces silver/ton. The weighted average grade over the 250.1 feet of mineralized intercept was 0.194 ounces gold/ton and 2.019 ounces silver.

Asamera presently holds 452 claims within and outside of the WSA and state that they spent approximately \$1,400,000 during the 1986/1987 exploration program. Asamera representatives have stated that, "While we have not been able to tie the mineralization into proven ore zones, ... we intend to continue working the property in view of developing a mine there."

The Asamera exploration does not directly effect precious metals potential within the WSA due to its location outside of the WSA. However, the geologic exploration targets which yielded such encouraging results at Cerro Gordo, also occur within the WSA.

These geologically favorable environments, therefore, should be classified as having a moderate potential for occurrence of gold and silver.

Historically, the mines of the Cerro Gordo District followed fissure, pocket and chimney ores, siliceous veins and sheared portions of diabase dike. All historic ore targets were, therefore, controlled by north and northwest trending fissures and fractures which formed in the footwall marble of the Cerro Gordo Master Fault (Merriam, C.W., 1963, Geology of the Cerro Gordo Mining District, Inyo County California, USGS Prof. Paper 408) The present-day ore target of Asamera (in addition to the faultcontrolled target) is a skarn-type deposit. This target is spatially related to the contact between Cretaceous quartz monzonite intrusions and Carboniferous calcareous marine sediments and metasediments. At this lithologic contact, the heat and gas exchange between pluton and susceptible host rocks, results in a mineralized "halo" beginning at the pluton margin and extending into the carbonate host as much as one-quarter mile (personal communication by Peter Clark, Asamera, 1988). All outcrops of the pluton in this area occur either at or within one mile of the hinge of a large anticline which runs along the crest of the Inyo range. This information led to an interpretation by BIM geologist Mark Ziegenbein in April, 1988 that the pluton may exist at a shallow depth along this hinge in areas where it does not crop out. The area of moderate metallic potential is, therefore, defined by BIM as a zone one-quarter mile wide around plutonic outcrops where carbonate rocks exist in a zone that extends one mile either side of the hinge line of the anticlinal structure. This area is on the eastern edge of the WSA.

A check of mining claim records in April of 1988 showed a significant change in the number of mining claims in the WSA. As stated above, 47 unpatented claims were on record in spring of 1986. As of March 25, 1988, there are approximately 29 unpatented claims within the WSA.

The distribution of mining claims in this WSA is summarized in Table 4 below.

Table 4 - Mining Claims

	NO.			ACRES		
TYPE	SUITABLE	NONSUIT.	TOTAL	SUITABLE	NONSUIT.	TOTAL
Mining Claims						
Lode	0	20	20	0	400	400
Placer	0	9	9	0	360	360
Mill Sites	0	0	0	0	0	0
Total	0	29	29	0	760	760

E. Impacts on Resources

The following Table 5 summarizes the effects on pertinent resources for all alternatives considered including designation or non-designation of the entire area as wilderness. (For a full explanation of this summary, refer to the Benton-Owens Valley/Bodie-Coleville Wilderness - Final Environmental Impact Statement.)

Table 5 - Comparative Summary of the Impacts by Alternative

ISSUE-RELATED	PROPOSED ACTION	ALL-WILDERNESS	PARLIAL-WILDERNESS
RESURCES Wilderness Values*	(NO-WITDENNESS/NO ACTION) The wilderness values of the Cerro Cordo WSA would be subjected to a minor overall impact by not designating the WSA as wilderness. The primary adverse impacts would be highly localized and considered moderate. Mining activities and geothernal development would result in a loss of naturalness on 130 acres and the perception of naturalness would be impaired over an area of 2,200 acres. Primitive and unconfined recreation would be diminished within the mining and geothernal development areas and by continued motorized recreation use which would also result in negligible impacts to naturalness and solitude. Special features would be retained except for possible negligible impacts to the historic Saline Valley salt tram due to continued motorized recreation use and vehicular access.	ness and solitude would be significantly retained locally as a result of prohibiting motorized recreation use and geothermal development. Additionally, should mining be precluded, raturalness and solitude would be retained within the projected mining area. However, if a mineral discovery cours and the valid existing rights can be established (low to moderate probability) there would be a moderate localized impact on raturalness and solitude within the 1,200-acre	fit to wilderness values on 12,199 acres as a result of prohibiting motorized recreation use. Within the 1,880 acres not designated wilderness, mining activity and geothernal development would result in a direct loss of naturalness on 130 acres. There would be a moderate impact on the perception of naturalness and solitude on 1,200 acres as a result of mining activities. Geothernal development would result in a minor impact on the perception of naturalness and solitude within 1,000 acres surrounding the development.
Motorized Recre- ation Use	There would be no impact on motorized recreation use. Projected use is anticipated to remain stable at the current 900 visitor-days per year.	There would be only minor impacts to motorized recreation users who would still have access along the boundary road to Cenno Gordo. Wilderness designation would result in 900 visitor-days per year foregone.	Wilderness designation would close approximately 6 miles of primitive vehicle routes within 12,199 acres of the WSA. All motorized recreation use within the wilderness portion of the WSA would be prohibited resulting in 500

Table 5 - Comparative Summary of the Impacts by Alternative (Cont'd)

ISSUE-RELATED RESCURCES	HOPOSED ACTION (NO-WILLDERNESS/ND ACTION)	ALL-WILLERNESS ALTERNATIVE	PARLIAL-WILDERNESS
Motorized Rec- reational Use (cont.)	(NOWITEANESS/NO ACTION)	ALIPAVILVE	ATTENMITVE The remaining 1,880 acres would remain open to motor- ized recreation use on 4 miles of primitive vehicle routes with use projected to increase from the current 400 visitor-days to 600 visitor days per year. Overall, only a minor impact would be in- curred due to access oppor- tunities outside the WSA.
Mineral Development*	There would be no impact on mineral development. Under the Proposed Action, the entire 14,079-acre WSA would be open to mineral entry. However, only an underground silver mine is projected for the western portion of the WSA.	There would be a minor impact on mineral development as a result of wilderness designation. The potential for mineral resources is none to low with an area of high potential for metallic minerals. There is only a low to moderate probability of a silver discovery that would result in a determination of valid existing rights leading to development.	impacts on mineral develop- ment in the 12,199-acre wil- derness portion of the WSA due to low mineral potential at best and the lack of
Geothermal Resource Development	There would be no impact on geothernal resource development. The entire 14,079 acres would be open for geothernal exploration and development. Only a small development is projected that would consist of four wellhead generators.		There would be no impact on geothermal resource development under the Partial Wilderness Alternative. Development of small-scale production is anticipated within the 1,880 acres of the WSA not designated as wilderness. While exploration and development would be prohibited within the 12,199 acres designated wilderness, this portion of the WSA has a low potential for geothermal resources with a low development potential. Therefore, it is anticipated no resource production would be foreone.

*Since this impact summary table was prepared, new mineral data has been obtained from Asmera Minerals, Inc. which may affect the degree of impact to minerals and/or wilderness values. Refer to the minerals resource section of this document.

Table 5 - Comparative Summary of the Impacts by Alternative (Cont'd)

ISSUE-RELATED RESOURCES	(NO-WILLERNESS/NO ACTION)	ALL-WILLERVESS ALTERVALIVE	PARITAL-WILDERNESS ALTERNATIVE
Inyo Mountain Salamander	There would be only regligible impacts on the Inyo Mountain salamender, if any, as a result of potential future mining activities. There are no management actions projected that would impact either the populations or the habitat.	While there are no surface disturbances or other dis- ruptive activities projected that would likely affect the Inyo Mountain salamander, wilderness designation would preclude any potential threats to the populations or habitats. Therefore, there would be a slight positive benefit.	Wilderness designation would provide a slight positive benefit to the Inyo Mountain salamander.

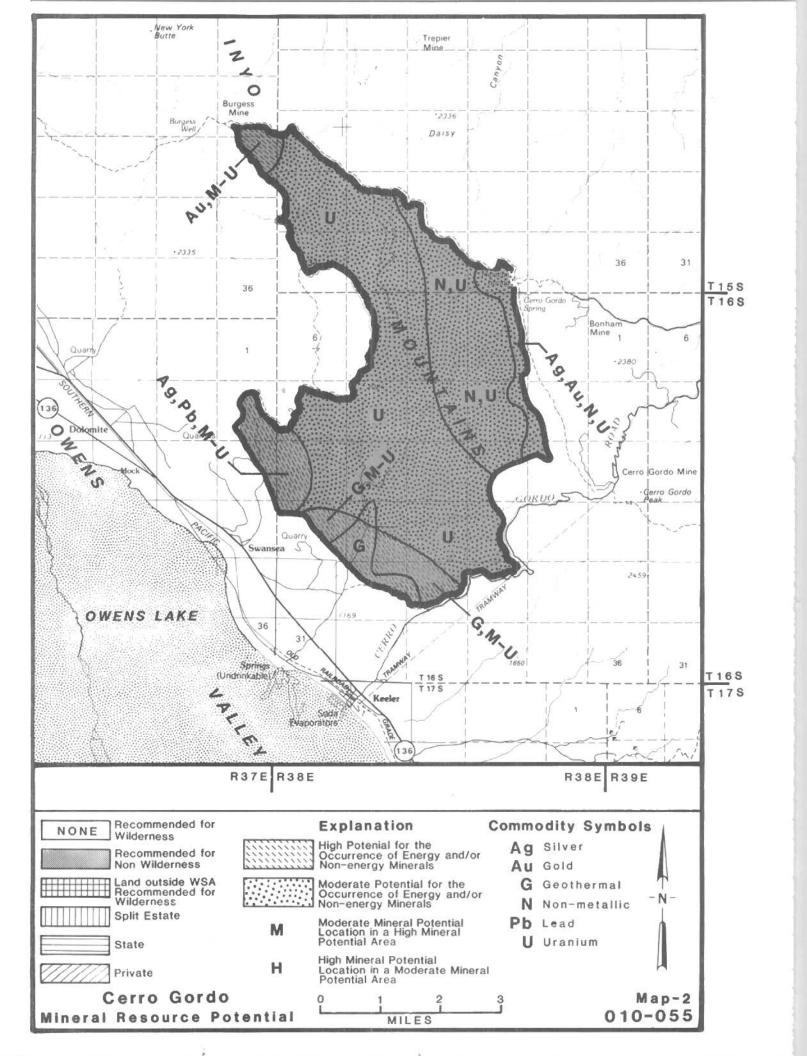
F. Local Social and Economic Considerations

No local social or economic considerations were identified in the Final EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA - Specific Public Comments

During the inventory phase, a few comments were received which dealt with resource values such as minerals and unique floral features.

After the inventory, comments were received up through the wilderness study process. Several comments supported wilderness designation. Many comments addressed the resource values that exist in the WSA. One comment noted the existence of a valuable quartzite deposit outside the WSA which may occur in the WSA. One comment addressed the need for public access into the area. One comment noted the existence of sensitive plants, historical values, and the adjoining Cerro Gordo Peak WSA (CDCA-124), While another comment addressed the area's wild and rugged scenic values. One comment noted the high flora and fauna values of the area. One comment stated the WSA adjoins the Cerro Gordo Peak WSA while another indicated that the excluded portions of the WSA identified in the DEIS be reincluded for wilderness study. This respondent also noted the existence of the plant Dedeckera. One comment stated the area is used for climbing by the Desert Peak Climbers.



A public meeting and public hearing were held in association with the DEIS for the WSAs within the EIS area. The public meeting was held in Markleeville, California; the public hearing in Bishop, California. Comments were received both orally through the hearing and in writing during the 90-day public review period. A total of 97 comments were received, both oral and written. At that time, 31 comments supported the Bureau's recommendation to designate the area as partially suitable for wilderness; 43 comments supported all wilderness; and 23 comments supported no wilderness.

No comments specific to the Cerro Gordo WSA were received from Federal agencies.

The California Department of Fish and Game has stated its support for designation of the Cerro Gordo WSA as wilderness, but recommended that the Cerro Gordo Mine road remain open for hunting access and that no new grazing permits be issued in this area to ensure retention of wildlife forage.

The Inyo County Board of Supervisors has passed a resolution opposing any additional wilderness areas in Inyo County.

Additional participation by Inyo County at the public hearing and District Advisory Council meeting emphasized their particular objection to wilderness designation of the Cerro Gordo WSA.

Based upon the Inyo County and District Advisory Council comments, which opposed any suitable wilderness recommendation for the Cerro Gordo WSA, the Bureau had modified its DEIS partial—wilderness recommendation (of 14,079 acres) to a no-wilderness recommendation in the subsequent Final EIS.